

Amendment to the Specification

On page 4, replace the paragraph starting on line 17 with the following:

The invention will be described in more detail with reference to the Figures. Referring to Fig. 1 there is shown an electrical motor 10 having a center rotor 1 and a stator 2 which comprises a series of electrical wires 3 that are wound such that when an electrical current passes through the wires 3 a rotating electromagnetic field is created which induces the rotor to rotate relative to the stator 2. As shown in Fig. 2 and Fig. 3, at least one wire 3 has an electrical insulation coating 4 in which a fiber optical cable 5 is embedded, which cable 5 may be provided with suitable microsensors 6, such as an accelerometer to detect vibrations, and/or optic gratings, such as fiber bragg gratings 7 that reflect light of a wavelength equal to the grating width and allow light of other wavelengths to pass through the cable 7. The gratings 7 may be designed such that the reflected wavelength varies with temperature such that the fiber optical cable 5 forms an elongate string of miniature thermometers along the length of the wire 3. Likewise the optic sensors 6 may be formed by seismic sensors which are formed by similar gratings that reflect varying wavelengths in response to vibrations so that the fiber optical cable 5 is an elongate multi-parameter sensor system that accurately detects any overheating and/or vibrations, for example when the associated pump is blocked or runs dry or when a bearing has worn out.